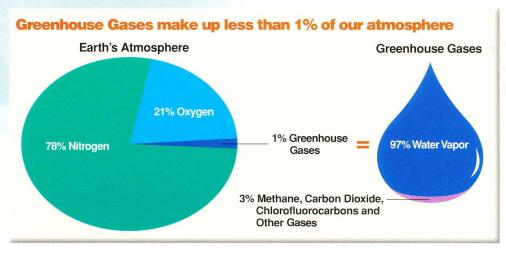
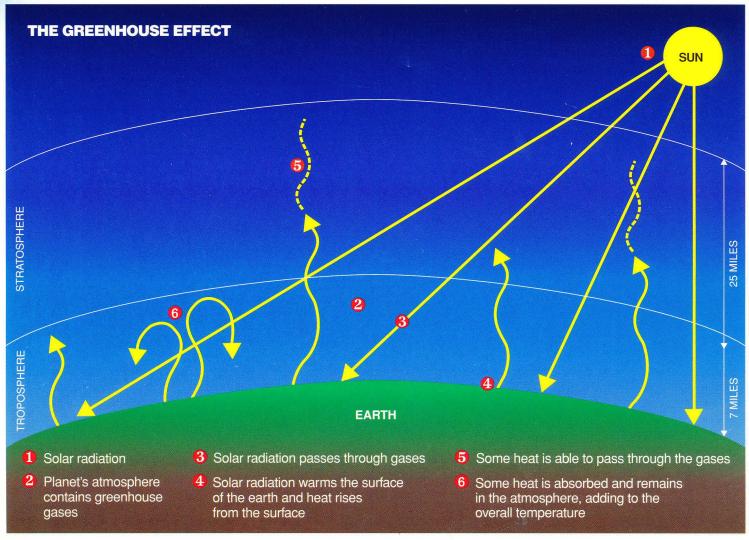
# CLEARING THE AIR ABOUT THE GREENHOUSE EFFECT

## What is the Greenhouse Effect?

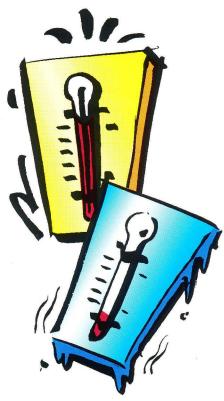
The greenhouse effect is a naturally occurring phenomenon which makes the earth inhabitable. Certain gases in the atmosphere, called "greenhouse gases," help keep temperatures on earth constant by trapping some of the heat generated by the sun's rays. Greenhouse gases include water vapor — the dominant greenhouse gas — methane (CH<sub>4</sub>), chlorofluorocarbons (CFCs) and carbon dioxide (CO<sub>2</sub>). Of all the greenhouse gases present, humans have the most influence on CO<sub>2</sub>.





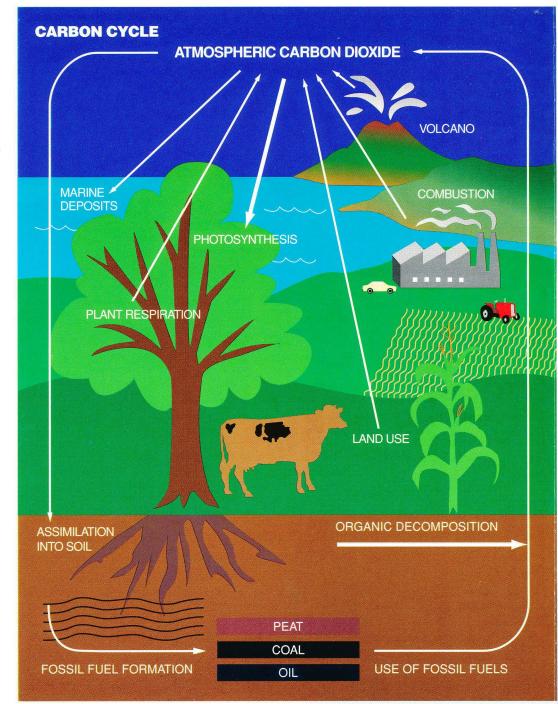
# How's the Weather Out There?

The earth's climate changes constantly. Records show that average temperatures have increased less than 1 degree Fahrenheit since the late 1800s. Scientists cannot be certain whether this is due to normal variability or whether it is linked to increased greenhouse gas levels in the atmosphere. Two-thirds of this rise in average temperatures occurred before 1945 when the use of petroleum and other carbon-based fuels began to increase.



Historically, temperatures have been collected at land-based sites, often in urban areas. The heat-trapping effects of buildings and streets in urban areas may have resulted in deceptively higher temperature readings. Since 1979, global temperature data has been collected using special weather satellites which show a very slight cooling trend of <sup>3</sup>/<sub>100</sub> of a degree Fahrenheit.

Today, scientists use computer models that, although very complex, can only crudely represent the climate and predict changes in our atmosphere. These computer models attempt to show how such factors as cloud cover, wind and ocean currents, forest growth and other CO<sub>2</sub> absorbing activities can affect global temperatures.



### DEPARTURE FROM NORMAL GLOBAL TEMPERATURES



# Why is Global Warming an Issue Today?

Projections from computer models suggest that a doubling of CO<sub>2</sub> in the atmosphere over the next 100 years could cause average temperatures to rise



from 1 to 6 degrees Fahrenheit. As our understanding of the complex factors making up our weather has improved, projected temperature increases have declined and are likely to decline further.

Fears about computer-based projections of global warming resulted in an international climate change treaty in Rio de Janeiro in 1992. The treaty obligated 38 developed countries, including the United States, Japan, the European Union and former Soviet bloc countries, to take voluntary steps to stabilize their greenhouse gas emissions at 1990 levels by the year 2000.

Developing nations, including China, India, South Korea, Brazil and Mexico were exempted. No emission reductions are required by the treaty from these countries.

Due to very positive economic growth, it became apparent that most of the nations covered by the Rio Treaty would not meet their voluntary emission reduction levels by 2000. As a result, a new treaty was concluded in Kyoto, Japan, in December 1997 to set targets and timeframes for greenhouse gas emission reductions after 2000.

Like the Rio Treaty, the Kyoto Treaty will only affect the 38 developed nations; unlike the Rio Treaty, the Kyoto agreement will be legally binding on these countries while still placing no emissions requirements on the 136 countries whose greenhouse gases are expected to increase more dramatically.

## Kyoto Treaty: US Negotiating Report Card

<b>US Position Pre-Kyoto</b>	<b>Kyoto Result</b>	Grade
Developed countries reduce to 1990 levels by 2008-2010	Reduce to 7% below 1990 levels	FAIL
Developing country participation	No participation	FAIL
International emissions trading	Trading limited to developed countries only (rules to be set)	FAIL
Joint implementation (credit for US-funded reductions)	Only through UN Fund (to be established)	FAIL
Methods to ensure other countries comply	Enforcement provisions to be determined later	Incomplete

U.S. negotiators receive failing marks for provisions agreed to in Kyoto. Instead of stabilizing emissions at 1990 levels, they agreed to 7% below 1990 levels. Instead of requiring participation by all countries, they agreed to no commitment at all for developing nations. Instead of pressing for flexible international emissions trading, they agreed to limited trading with complex rules.

## What will the Kyoto Treaty Cost?

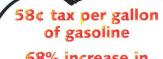
The new treaty will be very costly for consumers and the U.S. economy.

To achieve what was agreed to for the United States, energy prices will have to increase or energy use will have to be rationed.

Under discussion is a policy option to "auction" limited permits to emit greenhouse gases — in effect, a tax. Economic studies suggest that this tax could amount to \$168 per ton of CO<sub>2</sub> emitted. For U.S. consumers, it would mean:

- 58¢ tax per gallon of gasoline
- 68% increase in household electric rates
  - 67% increase in natural gas prices
- \$118 tax per ton on coal (which generates 56% of U.S. electricity)

Early estimates were that almost 1 million jobs would be lost. That estimate is now closer to 2 million.



68% increase in household electric rates

67% increase in natural gas prices

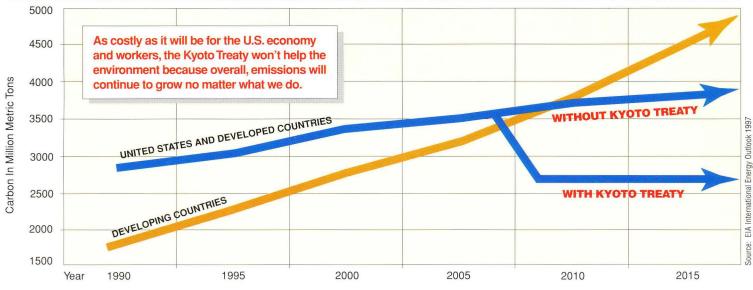
\$118 tax (647% increase)
per ton on coal



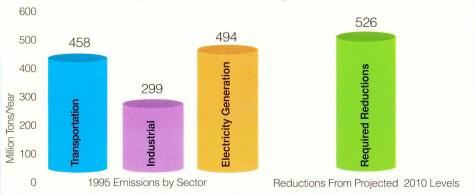


Jobs in the energy-intensive industries such as automobiles, aluminum, steel, and petroleum refining would be lost, and many of those jobs could be exported to developing countries that are exempt from binding emissions requirements.

#### CARBON EMISSION COMPARISON BETWEEN DEVELOPED COUNTRIES AND DEVELOPING COUNTRIES



#### U.S. Carbon Emission Reduction Requirements



U.S. emission reduction obligations in 2010 will be more than all electricity sector emissions in 1995, almost double those of the industrial sector, and more than emissions from all cars, trucks, trains, airplanes and boats in 1995.

What is Wrong with the Kyoto Treaty?

The science is still uncertain. Scientists cannot tell us how much and where temperatures will increase or, for certain, whether they will increase at all.

It will be even more costly to American families. Fuel and electricity costs will go up by 50% or more.



It will not improve the environment. By 2015, greenhouse gas emissions from developing countries will exceed those of the United States and all other developing countries combined. Overall, global emissions will continue to grow. If global warming is real, the Kyoto Treaty is not a solution.



## WHAT CAN YOU DO?

Write The White House and your Senators. Ask the President not to sign the treaty. Tell him that you oppose a treaty that is unfair and ineffective. The U.S. Senate must ratify all treaties. Write your Senators and ask them not to ratify the treaty if the President signs it.

#### Write to:

Source: Energy Information Agency, 1997

The President The White House Washington D.C. 20500

e-mail: president@whitehouse.gov